

FIRST REPORT ON FOUR GENERA OF ANTILLOCORINI (INSECTA, HETEROPTERA, LYGAEOIDEA, RHYPAROCHROMIDAE) FROM CHINA, WITH DESCRIPTION OF A NEW SPECIES

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Abstract The tribe Antilocorini from China is reviewed. Four genera, *Baeocoris* Slater, *Lethaeaster* Breddin, *Lethaeastroides* Malipatil & Woodward, and *Siniasinensis* Scudder, and 4 species, *Baeocoris molliculus* Slater, 1983, *Lethaeastroides sarawakensis* Malipatil & Woodward, 1989, *Lethaeastroides vooni* Malipatil & Woodward, 1989, and *Siniasinensis brevis* (Motschulsky, 1863) are reported for the first time from China. A new species, *Lethaeaster maculatum* sp. nov. is described and illustrated. A key to Chinese genera of Antilocorini is provided.

Key words Heteroptera, Rhyparochromidae, Antilocorini, new records, new species, China.

Introduction

Antilocorini is a relatively small tribe of Rhyparochromidae (Insecta, Heteroptera, Lygaeoidea). It is characterized by: 1) bucculae meeting near base of head; 2) apical corial margin concave at inner 1/3–1/2; 3) abdomen with all spiracles ventrally located; 4) three trichobothria of sternum V arranged in a linear series; 5) nymphs with three pairs of broad abdominal scent gland openings between terga 3/4, 4/5, and 5/6, and lack of a Y-suture.

Antilocorini ranked in the basal clade in the phylogenetic relationships of Rhyparochromidae, closely related to Lethaeini and Lilliputocorini (Slater & Woodward, 1982).

Slater & O'Donnell (1995) included 29 genera in Antilocorini in their catalogue of the world, half of them distributed in the Neotropical Region. Only one genus, *Botocudo* Kirkaldy, has been recorded from China previously. In the present paper, four genera, *Baeocoris* Slater, *Lethaeaster* Breddin, *Lethaeastroides* Malipatil & Woodward, and *Siniasinensis* Scudder, including four species, are reported for the first time from China, and a new species, *Lethaeaster maculatum* sp. nov. is described.

Examined materials are deposited in the Insect Collections of Institute of Entomology, College of Life Sciences, Nankai University, Tianjin, China, except mentioned in the text. The type specimens of the new species are deposited in Institute of Zoology, Academia Sinica, Beijing, China (IZAS).

All measurements are in millimeters. Paratypes

measurements and number of individuals measured are put in parentheses after the holotype.

Key to Chinese genera of Antilocorini.

1. Sternum V with middle trichobothrium as close to posterior one as to anterior one (Fig. 2) *Lethaeaster* Breddin
Sternum V with middle trichobothrium placed closer to the posterior one than to the anterior one 2
2. Pronotum with an acute or rounded projection from each lateral posterior angle (Figs 6–7)
..... *Lethaeastroides* Malipatil & Woodward
Pronotum with lateral posterior angle rounded 3
3. Fore femur with rows of spines *Botocudo* Kirkaldy
Fore femur mutic 4
4. Body dorsally flattened; apical corial margin only slightly concave in inner 1/3 (Fig. 8) *Baeocoris* Slater
Body blunt; apical corial margin deeply concave in inner 1/3 (Fig. 9) *Siniasinensis* Scudder

Baeocoris Slater, 1983

Baeocoris Slater, 1983: 290–291; Slater & O'Donnell, 1995: 103. Type species: *Baeocoris molliculus* Slater, 1983.

The genus *Baeocoris* included three species: *B. sulawesii* Slater, *B. woodwardi* Slater, and *B. molliculus* Slater distributed in Sarawak, Sabah of Malaysia and Sulawesi of Indonesia. This genus can be distinguished from other genera of Antilocorini by the body clothed with semi erect hairs; head basally with a large pruinose area; ocelli placed far laterad; lateral pronotal margins deeply sinuate; apical corial margin only slightly concave in inner 1/3; metathoracic scent gland auricle strongly curved posteriorly; fore femora mutic; middle trichobothrium closer to the posterior one than to the anterior one, and posterior trichobothrium placed behind spiracle V. In this paper, *B. molliculus* Slater is reported for the first time from China (Yunnan).

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***Baeocoris molliculus* Slater, 1983**

Baeocoris molliculus Slater, 1983: 289, 291 – 293; Slater & O'Donnell, 1995: 103.

1 female and 1 male, China, Yunnan, Mengla, Menglun (21.9° N, 101.2° E); other information unknown.

Distribution. China (Yunnan); Malaysia (Sarawak, Sabah).

***Lethaeaster* Breddin, 1905**

Lethaeaster Breddin, 1905: 124 – 125; Bergroth, 1918: 83; Slater, 1964: 863; 1983: 285 – 290. Type species: *Lethaeaster anthoroides* Breddin, 1905.

The genus *Lethaeaster* is a small group, only included 3 species (Slater & O'Donnell, 1995), *Lethaeaster anthoroides* Breddin from Java, Malaysia and Australia, *Lethaeaster helvipennis* Bergroth from Philippines and *Lethaeaster oenonotum* Slater from Papua New Guinea. The genus is characterized by head basally with a pruinose area; scutellum with a impunctate Y-shaped carina; clavus with three completed rows of punctures; apical corial margin slightly sinuate near inner 1/3; middle trichobothrium of sternum V placed as close to the anterior one as to the posterior one, and the posterior one located before spiracle V; rostrum relatively long, reaching abdominal tergum III or IV. The genus is recorded for the first time from China, and a new species, *Lethaeaster maculatum* sp. nov., is described in this paper.

***Lethaeaster maculatum* sp. nov. (Figs 1 – 5)**

Head black-brown with tylus testaceous. Antennae uniformly testaceous. First rostral segment black-brown, second testaceous, third and fourth pale testaceous. Pronotum black-brown, collar, lateral margins and basal half of posterior lobe brown. Scutellum brown, base black and pruinose, distal 2/3 with a V-shaped pale macula. Hemelytra testaceous, corium with three black-brown maculae, respectively at inner angle, apical angle and middle of anterior margin; membrane testaceous, hyaline. Ventral and pleural surfaces of thorax black-brown. Femora black-brown except the pale apices, tibiae and tarsi testaceous. Abdomen venter dark-brown.

Head pubescent, weakly punctuate, basally with a triangular pruinose area. Tylus protruding. Eye with short hairs. Ocelli close to inner margin of eyes. Antennae with segment I about 1/4 exceeding apex of head. Rostrum relatively long, reaching abdominal sterna IV.

Pronotum broad, with short pubescences; anterior lobe very slightly swollen, only with several shallow punctures near mid-longitudinal line; posterior lobe evenly punctuate except lateral angle. Scutellum with coarsely punctures on V-shaped pale macula,

other area with small punctures except impunctate low Y-shaped carina. Corium with two rows of punctures near claval suture, R + M area spreading even punctures. Prosternum thickly punctuate near collar area, mesosternum with a longitudinal carina in center, thoracic pleura with a few punctures; metathoracic scent gland auricle thin and curved posteriorly; evaporative area small, occupying inner 1/2 of metapleura and posterior 1/2 of mesoacetabulum. Fore femur relatively incrassate, mutic.

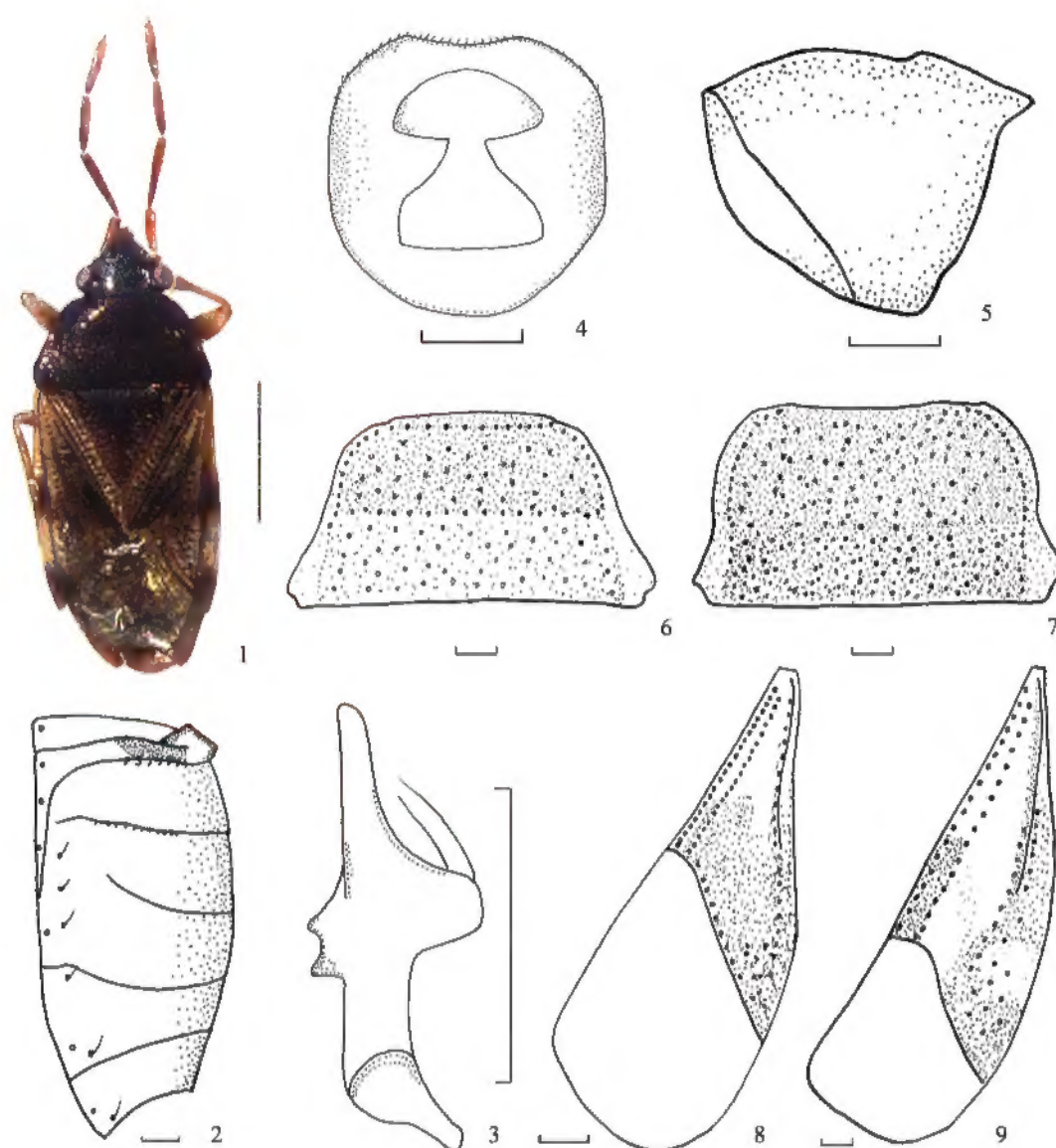
All spiracles on ventral side, those of sternum II – IV placed on sternal “shelf” (Fig. 2). Opening of genital capsule (Figs 4 – 5) simple, lateral margins with a pair of large triangular processes. Paramere (Fig. 3) with blade straight, apex rounded, inner projection bifurcate, outer projection relatively large, truncate.

Measurements (mm). Length head 0.42 (0.40 – 0.50), width 0.60 (0.60 – 0.67), interocular space 0.36 (0.36 – 0.40), length antennal segments I 0.22 (0.20 – 0.27), II 0.40 (0.37 – 0.47), III 0.28 (0.28 – 0.37), IV 0.36 (0.36 – 0.40); length pronotum 0.56 (0.53 – 0.67), width anterior pronotal margin 0.48 (0.47 – 0.50), width posterior pronotal margin 1.08 (1.08 – 1.20); length scutellum 0.64 (0.64 – 0.65), width 0.64 (0.64 – 0.65); length claval suture 0.85 (0.83 – 0.90), length apical corial margin 0.68 (0.67 – 0.70); total body length 2.5 (female 2.9 – 3.1, male 2.5 – 2.9) (6 paratypes measured).

Etymology. *Maculatum* referring to scutellum with a pale macula.

Holotype male, China, Guangxi, Napo Defu (23.7° N, 106.8° E; alt. 1350 m), 19 May 2000, leg. LI Wen-Zhu. Paratypes: 1 male, same data as holotype; 1 male, 3 females, China, Guangxi, Daxin (23.3° N, 110.4° E; alt. 280 m), 29 Mar. 1998, leg. LI Wen-Zhu, WU Chun-Sheng (1 male dissected); 2 females, China, Guangxi, Fangcheng, Fulong (21.7° N, 108.3° E; alt. 240 m), 20 Apr. 1998, leg. WU Chun-Sheng.

This new species resembles *Lethaeaster helvipennis* Bergroth from Philippine and *Lethaeaster oenonotum* Slater from Papua New Guinea in corium without a complete dark transverse macula; but in *Lethaeaster helvipennis* Bergroth, the antennae testaceous, base of third and fourth segments fuscous, and the antennal segment I subequal to the segment III, entirely posterior 2/3 of the scutellum pale yellow rather than a “V” shaped pale macula; in *Lethaeaster oenonotum* Slater, the antennae red-brown with first segment yellow; the head narrower, the width is less than two times as great as the length of the antennal segment I (66: 42,



Figs 1–5. *Lethaeaster maculatum* sp. nov. 1. Habitus, dorsal view. 2. Abdomen. 3. Left paramere. 4. Genital capsule, dorsal view. 5. Genital capsule, lateral view. Fig. 6. *Lethaeastroides vooni* Malipatil & Woodward, pronotum. Fig. 7. *Lethaeastroides sarawakensis* Malipatil & Woodward, pronotum. Fig. 8. *Baecoris molliculus* Slater, corium and membrane. Fig. 9. *Siniasinensis brevis* (Motschulsky), corium and membrane. Scale bars: 1 = 1 mm, 2–9 = 0.1 mm.

Slater, 1983); however, in the new species, the head width nearly three times as the length of the antennal segment I; further more, in *Lethaeaster oenonotum* Slater, the genital capsule produced posteriorly with a strong dorsal “lip”, the paramere with blade sharp, outer projection rounded; whereas in the new species, the genital capsule without such “lip” (Fig. 5), the paramere with blade straight and not sharply narrowed toward the apex, outer projection truncate.

Distribution. China (Guangxi).

***Lethaeastroides* Malipatil & Woodward, 1989**

Lethaeastroides Malipatil & Woodward, 1989: 169–172; Slater & O'Donnell, 1995: 106. Type species: *Lethaeastroides sarawakensis* Malipatil & Woodward, 1989.

Lethaeastroides was established by Malipatil &

Woodward (1989) with two species from Malaysia. This genus is characterized by body with erect and semierect hairs; head basally with a dull pruinose area; antennae stout; pronotal lateral margins concave near middle; pronotal lateral posterior angle with an acute or rounded projection; scutellum with a median impunctate carina; apical corial margin of macropterous slightly concave in base 1/3; auricle of metathoracic scent gland auricle short and straight, not bent posteriorly; sternum V with middle trichobothrium placed closer to the posterior than to the anterior one; fore femora with long hairs and spinules; macropterous, submacropterous or coleopteroid. In this paper, two species, *Lethaeastroides vooni* Malipatil & Woodward, and *Lethaeastroides*

sarawakensis Malipatil & Woodward are reported for the first time from China.

Key to species of *Lethaeastroides* Malipatil & Woodward.

1. Pronotum entirely black or black-brown except lateral area; lateral posterior angle with an acute projection (Fig. 7)
..... *Lethaeastroides sarawakensis* Malipatil & Woodward
Anterior pronotal lobe black, posterior lobe and lateral area paler, reddish-brown; lateral posterior angle with a rounded projection (Fig. 6) *Lethaeastroides vooni* Malipatil & Woodward

Lethaeastroides sarawakensis Malipatil & Woodward, 1989

Lethaeastroides sarawakensis Malipatil & Woodward, 1989: 170 - 171; Slater & O'Donnell, 1995: 107.

1 female and 1 male, China, Yunnan, Mengla, Menglun (21.9° N, 101.2° E); other information unknown.

Distribution. China (Yunnan); Malaysia.

Lethaeastroides vooni Malipatil & Woodward, 1989

Lethaeastroides vooni Malipatil & Woodward, 1989: 172; Slater & O'Donnell, 1995: 107.

1 male, China, Guangxi, Jinxiu, Luoxiang (24.1° N, 110.1° E; alt. 400 m), 14 May 1999, leg. GAO Ming-Yuan (IZAS).

Distribution. China (Guangxi); Malaysia.

Siniasinensis Scudder, 1968

Siniasinensis Scudder, 1968: 590; Slater & O'Donnell, 1995: 108. Type species: *Rhyparochromus brevis* Motschulsky, 1863.

The genus *Siniasinensis* Scudder is also a small genus, only included three species; *Siniasinensis brevis* (Motschulsky) and *Siniasinensis cingalensis* (Distant) from Burma and Sri Lanka, and *Siniasinensis oculatus* Scudder from Ruwenzori of East Africa. This genus can be recognized by following characters: body clothed with dense semi-decumbent pubescence; head dorsally with a triangular dull area; eyes and tylus prominent; lateral pronotal margins slightly impressed

near middle; apical corial margin deeply concave at inner 1/3; fore femur with a row of long setae; trichobothria of sternum V in linear series, middle trichobothrium closer to the posterior one than to the anterior one, posterior trichobothrium in front of spiracle V. *Siniasinensis brevis* (Motschulsky, 1863) is recorded for the first time from China.

Siniasinensis brevis (Motschulsky, 1863)

Rhyparochromus brevis Motschulsky, 1863: 78.

Siniasinensis brevis Scudder, 1968: 591 - 592; Slater & O'Donnell, 1995: 108.

2 males and 3 females, China, Yunnan, Mengla, Menglun (21.9° N, 101.2° E); other information unknown.

Distribution. China (Yunnan); Burma, Sri Lanka.

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中国微小族四新纪录属及一新种记述 (半翅目, 长蝽总科, 地长蝽科)

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摘要 微小长蝽族 Antilocorini 为半翅目地长蝽科内较小的一个族。全世界已纪录 29 属 (Slater & O'Donnell, 1995), 约有半数以上的属分布在新热带区。中国原记载有 1 属, 微小长蝽属 *Botocudo* Kirkaldy, 本文新增平长蝽属 *Baeocoris* Slater, 波长蝽属 *Lethaeaster* Breddin, 雷长蝽属 *Lethaeastroides* Malipatil & Woodward 和凹长蝽属 *Siniasinensis* Scudder 在中国的分布纪录, 包含中国 4 新纪录种: 柔平长蝽 *Baeocoris molliculus* Slater, 1983, 尖角雷长蝽 *Lethaeastroides sarawakensis* Malipatil &

Woodward, 1989, 翁雷长蝽 *Lethaeastroides vooni* Malipatil & Woodward, 1989 和短凹长蝽 *Siniasinensis brevis* (Motschulsky, 1863)。描述了 1 新种, 斑盾波长蝽 *Lethaeaster maculatum* sp. nov., 提供了新种的整体图, 形态特征图和雄性外生殖器图。文中给出中国微小长蝽族分属检索表。

斑盾波长蝽, 新种 *Lethaeaster maculatum* sp. nov. (图 1~5)

新种革片中部无贯穿革片的深色横斑, 与 *Lethaeaster hehnipennis* Bergroth 和 *Lethaeaster oemonotum* Slater 相似。但

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Lethaeaster helvipennis Bergroth 触角黄褐色, 第3节基部和第4节黑褐色, 触角第1节与第3节等长, 小盾片端部2/3全部浅黄色, 而新种触角一色黄褐色, 第1节短于第3节, 小盾片端部具“V”型淡色斑。*Lethaeaster oenonotum* Slater 触角红褐色, 第1节黄色, 头较窄, 头宽不及触角第1节长的2倍(66:42, Slater, 1983), 而新种触角一色, 头较宽, 头宽大于触角第1节长的2倍, 而且二者雄性外生殖器的特征不同, *Lethaeaster oenonotum* Slater 生殖节的背面向后伸出一片状结构(lip), 抱握器叶片向端部明显变尖, 外突圆, 而新种生殖节

关键词 半翅目, 地长蝽科, 微小族, 新种, 新纪录, 中国.
中图分类号 Q969.35

背面无上述片状结构, 抱握器叶片较直, 且端部钝圆, 外突略呈截型。

正模♂, 广西那坡德孚, 海拔1350 m, 2000-05-19, 李文柱采。副模: 1♂, 同正模; 1♂, 3♀♀, 广西大新, 海拔280 m, 1998-03-29, 李文柱、武春生采; 2♀♀, 广西防城扶隆, 海拔240 m, 1998-04-20, 武春生采。

新种模式标本保存在中国科学院动物研究所。

词源: 新种种名以其小盾片具浅色斑“*maculatum*”而命名。